

ABSTRACT OF THE DISCLOSURE

An alignment apparatus which generates driving forces with six degrees of freedom between stator coils and movable element magnets to implement high-accuracy position and posture control has movable element magnets (114) which are arrayed in a plate-like plane of the movable element in accordance with an array cycle and are magnetized in predetermined directions, stator coils (116) which are arrayed at intervals corresponding to the array cycle, and a current controller which supplies to each pair of adjacent ones of stator coils control currents having phase differences to generate driving forces for driving the movable element between the movable element magnets and stator coils facing the movable element magnets.